

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: August 7, 1996
Date Received: August 1, 1996
Project: Metro Self Monitor, PO #M54080
Date Samples Extracted: August 1, 1996
Date Extracts Analyzed: August 2, 1996

**RESULTS FROM THE ANALYSIS OF THE PROCESS WATER SAMPLE
FOR CHROMIUM, COPPER, NICKEL, ZINC**

USING METHOD 6010

Samples Processed Using Method 3005A

Results Reported as mg/L (ppm)

<u>Sample ID</u>	<u>Chromium</u>	<u>Copper</u>	<u>Nickel</u>	<u>Zinc</u>
M54080	0.87	1.2	1.1	0.13
Method Blank	<0.05	<0.05	<0.05	<0.05

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**QUALITY ASSURANCE RESULTS
FOR TOTAL METALS BY
INDUCTIVELY COUPLED PLASMA (ICP)
(METHOD 6010)**

Laboratory Code: 71171 (Duplicate)

<u>Analyte:</u>	<u>Reporting Units</u>	<u>Sample Result</u>	<u>Duplicate Result</u>	<u>Relative Percent Difference</u>	<u>Acceptance Criteria</u>
Chromium	mg/L (ppm)	0.87	0.87	0	0-20
Copper	mg/L (ppm)	1.2	1.2	0	0-20
Nickel	mg/L (ppm)	1.1	1.1	0	0-20
Zinc	mg/L (ppm)	0.13	0.12	8a	0-20

Laboratory Code: 71171 (Matrix Spike)

<u>Analyte:</u>	<u>Reporting Units</u>	<u>Spike Level</u>	<u>Sample Result</u>	<u>% Recovery MS</u>	<u>% Recovery MSD</u>	<u>Acceptance Criteria</u>	<u>Relative Percent Difference</u>
Chromium	mg/L (ppm)	5	0.87	91	94	80-120	3
Copper	mg/L (ppm)	5	1.2	93	96	80-120	3
Nickel	mg/L (ppm)	10	1.1	92	94	80-120	2
Zinc	mg/L (ppm)	5	0.13	92	94	80-120	2

Laboratory Code: Spike Blank

<u>Analyte:</u>	<u>Reporting Units</u>	<u>Spike Level</u>	<u>% Recovery MS</u>	<u>% Recovery MSD</u>	<u>Acceptance Criteria</u>	<u>Relative Percent Difference</u>
Chromium	mg/L (ppm)	5	95	98	80-120	3
Copper	mg/L (ppm)	5	96	99	80-120	3
Nickel	mg/L (ppm)	10	95	97	80-120	2
Zinc	mg/L (ppm)	5	94	96	80-120	2

a - The analyte was detected at a level less than five times the detection limit. The RPD results may not provide reliable information on the variability of the analysis.

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

James E. Bruya, Ph.D
Beth M. Albertson, M.S.
Bradley T. Benson
Kelley D. Wilt

3012 16th Avenue West
Seattle, WA 98119-2029
TEL: (206) 285-8282
FAX: (206) 283-5044

August 7, 1996

**INVOICE # 96ACU0807-3
DUPLICATE COPY**

Accounts Payable
Alaskan Copper Works
628 South Hanford
Seattle, WA 98134

RE: Project Metro Self Monitor, PO #M54080: Results of testing requested by
Gerry Thompson, Project Manager for material submitted on August 1, 1996.

1 process water sample analyzed for
Chromium, Copper, Nickel, and Zinc
using Method 6010 @ \$65 per sample

\$ 65.00

Amount Due

\$ 65.00

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Seattle, WA 98119-2029
TEL: (206) 285-8282
FAX: (206) 283-5044

August 7, 1996

Gerry Thompson, Project Manager
Alaskan Copper Works
628 South Hanford
Seattle, WA 98134

Dear Mr. Thompson:

Enclosed are the results from the testing of material submitted on August 1, 1996 from your Metro Self Monitor, PO #M54080 project.

We appreciate this opportunity to be of service to you and hope you will call if you should have any questions.

Sincerely,

FRIEDMAN & BRUYA, INC.



Kurt Johnson
Chemist

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Enclosures
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